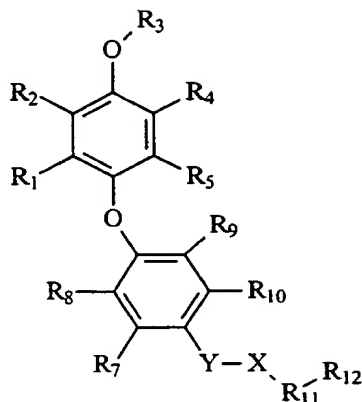


What is claimed is:

1. A compound characterized by the structure:



and pharmaceutically acceptable salts, hydrates, and biohydrolyzable amides, esters, and imides thereof, wherein:

R_1 , R_2 , R_5 , R_7 , and R_{10} are each, independently, selected from the group consisting of hydrogen, halogen, alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, and heteroalkynyl;

R_4 is selected from the group consisting of halogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, arylalkyl, heteroalkyl, heteroalkenyl, heteroalkynyl, heterocycloalkyl, heterocycloalkenyl, heteroaryl, heteroarylalkyl, and heteroarylalkenyl; with the proviso that when R_2 is hydrogen, Y is $-\text{CH}_2\text{CHK}_1$, X is selected from the group consisting of $-\text{NZ}-$ and $-\text{NH}-$, and R_{12} is $\text{C}_1 - \text{C}_4$ alkyl, wherein K_1 is selected from the group consisting of hydrogen and $\text{C}_1 - \text{C}_4$ alkyl and Z is $\text{C}_1 - \text{C}_4$ alkyl, then R_4 is not arylalkyl;

R_8 and R_9 are each, independently, selected from the group consisting of hydrogen, halogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, arylalkyl, heteroalkyl, heteroalkenyl, heteroalkynyl, heterocycloalkyl, heterocycloalkenyl, heteroaryl, heteroarylalkyl, and heteroarylalkenyl; with the proviso that at least one of R_8 and R_9 is not hydrogen;

R_3 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, arylalkyl, heteroalkyl, heteroalkenyl,

heteroalkynyl, heterocycloalkyl, heterocycloalkenyl, heteroaryl, heteroarylalkyl and heteroarylalkenyl;

Y is selected from the group consisting of bond, alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, and heteroalkynyl;

X is selected from the group consisting of -NZ-, -NH-, and -O-;

R₁₁ is selected from the group consisting of bond and -C(O)-; with the provisos that when Y is bond and X is -O- then R₁₁ is -C(O)-; and when Y is alkyl and X is -O- then R₁₁ is not -C(O)-;

R₁₂ is selected from the group consisting of alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, heteroalkynyl, cycloalkyl, cycloalkenyl, heterocycloalkyl, heterocycloalkenyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, and heteroarylalkenyl; with the provisos that when R₁₁ is bond, then R₁₂ and Z are optionally bonded together to form a cycle selected from the group consisting of cycloalkyl, cycloalkenyl, heterocycloalkyl, heterocycloalkenyl, aryl, and heteroaryl; when R₁₂ is heteroalkyl, heteroalkenyl, heteroalkynyl, heterocycloalkyl, heterocycloalkenyl, heteroaryl, heteroarylalkyl, or heteroarylalkenyl, then a heteroatom of R₁₂ is not directly covalently bonded to R₁₁; when Y is bond or hydroxy-substituted ethyl, X is -NH-, and R₁₁ is bond, then R₁₂ is not methyl; and when Y is bond, X is -O-, and R₁₁ is -C(O)- then R₁₂ is not aryl; and

Z is selected from the group consisting of alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, and heteroalkynyl; with the proviso that when R₁₁ is bond, then R₁₂ and Z are optionally bonded together to form a cycle selected from the group consisting of cycloalkyl, cycloalkenyl, heterocycloalkyl, heterocycloalkenyl, aryl, and heteroaryl.

2. A compound according to Claim 1 wherein X is selected from the group consisting of -NZ- and -NH-; with the proviso that each of R₈ and R₉ is not hydrogen.

3. A compound according to any of the preceding claims wherein Y is bond.

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H13

4. A compound according to any of the preceding claims wherein R_4 , R_8 , and R_9 are each, independently, selected from the group consisting of halogen, alkyl, alkenyl, and heteroalkyl; and wherein R_3 is selected from hydrogen, lower alkyl, and lower alkenyl.

5. A compound according to any of the preceding claims wherein R_{12} is selected from the group consisting of alkyl, heteroalkyl, arylalkyl, and heteroarylalkyl; with the proviso that when R_{11} is bond, then R_{12} and Z are optionally bonded together to form a cycle selected from the group consisting of cycloalkyl, cycloalkenyl, heterocycloalkyl, heterocycloalkenyl, aryl, and heteroaryl.

6. A compound according to any of the preceding claims wherein R_1 , R_2 , R_5 , R_7 , and R_{10} are each hydrogen.

7. A composition characterized by a compound according to any of the preceding claims and a carrier.

8. A method of treating hair loss comprising administering to a mammal a composition according to claim 7.

9. A method according to 8 wherein the administration is topical.

10. A method according to any of claims 8 and 9, wherein the composition further comprises minoxidil.